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09/899,907	07/05/2001	Yoshimasa Honda	33782	3598

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EXAMINER	
LEE, RICHARD J	

ART UNIT	PAPER NUMBER
2613	8

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/899,907	Applicant(s) HONDA ET AL.	
	Examiner Richard Lee	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 7 and 9-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

(1) claim 7, line 5, the phrase "can be" as claimed does not set forth positive recitation and as such renders the claim indefinite;

(2) claim 9, lines 9-10, "said outputted moving picture data" shows no clear antecedent basis;

(3) claim 11, lines 3-6, the phrase "motion compensation means ... for quarry out area" as claimed is vague and indefinite in that it is not particularly understood what is meant by "in that only corresponding portion in the quarry out area is referred when the motion the motion compensation for quarry out area" as claimed;

(4) claim 12, lines 5-8, the phrase "bit rate correction means for selecting rate correction data for each frame from moving picture data input to apparatus so as to fit with a bit rate to be output" as claimed is vague and indefinite in that it is unclear what is considered "bit rate correction means for selecting rate correction data for each frame from moving picture data input to apparatus" as claimed;

(5) claim 13, line 4, "said encoded moving picture data" shows no clear antecedent basis;

(6) claim 14, lines 3-4, "said encoded picture data" shows no clear antecedent basis;

(7) claim 14, line 4, the phrase "can be" as claimed does not set forth positive recitation and as such renders the claim indefinite;

(8) claim 15, line 8, the phrase "can be" as claimed does not set forth positive recitation and as such renders the claim indefinite;

(9) claim 17, line 2, "of" should be changed to "for" in order to provide proper antecedent basis for the same as specified at claim 15, line 6;

(10) claim 18, lines 5-6, "said outputted moving picture apparatus" shows no clear antecedent basis;

(11) claim 19, lines 5-6, "said outputted moving picture apparatus" shows no clear antecedent basis; and

(12) claim 20, lines 5-6, "said outputted moving picture apparatus" shows no clear antecedent basis.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 9, 10, 12, 13, 15, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yanagihara et al of record (5,745,644).

Yanagihara et al discloses a method and apparatus for encoding a digital video signal as shown in Figure 1, and teaches the same apparatus for generating outputted moving picture data derived from inputted uncompressed moving picture data, moving picture data producing apparatus to which uncompressed moving picture data is input, and moving picture encoding apparatus (i.e., 1A, 1B, 1C, 2, 3A, 3B, 3C, 4, 5 of Figure 1) as claimed in claims 1, 2, 9, 10, 12, 13, 15, and 20, comprising the same compression means (i.e., 6-9 of Figure 1) including quantization means (i.e., 10 of Figure 1) for

generating compressed moving picture data from the uncompressed moving picture data; rate correction data producing means (i.e., 10-14 of Figure 1, and see column 7, line 55 to column 8, line 43) for producing rate correction data (i.e., output of 14 to frame seg/error correct 15 of Figure 1) to be added to the compressed moving picture data (i.e., as provided at the output of 9 to frame seg/error correct 15 of Figure 1) to generate the outputted moving picture data which is used by another apparatus (i.e., as provided by 14 of Figure 1, and see column 8, lines 16-30) to change the bit rate of the compressed moving picture data; wherein the rate correction data producing means creates rate correction data which enables rate changing by another apparatus by conducting a quantization for an area having high bit rate in motion picture frames (i.e., quantizer 10 serves to quantize the components by weighting each thereof, thereby providing the quantization for all types of areas, including those having high bit rate in motion picture frames, see column 7, lines 1-36); wherein the rate correction data producing means includes a quarry out area deciding means (i.e., as provided by 4 of Figure 1) which decides an area which is able to partially quarry out in a frame of moving picture data, and the rate correction data producing means creates the rate correction data for region in the quarry out area thus decided (i.e., as provided by 10-14 of Figure 1); wherein the rate correction data producing means produces the rate correction data which enables rate changing by the another apparatus for at least one or more areas within the quarry out area (i.e., quantizer selecting circuit 14 regulates the amount of quantized and variable length encoded data, setting new set of quantization intervals when appropriate, thereby enabling rate changing by another apparatus 14 for at least one or more areas within the quarry out area, see column 7, line 55 to column 8, line 43); bit rate correction means for

selecting rate correction data for each frame from moving picture data input to apparatus so as to fit with a bit rate to be output (i.e., as provided by 10-14 of Figure 1), and replace the selected with compressed moving picture, so that another moving picture data having different bit rate is synthesized, wherein the bit rate is changed based on the rate correction data without decoding all of the inputted moving picture data (i.e., circuit 14 selects a new set of quantization level, thereby replacing the selected with compressed moving picture so that another moving picture data having different bit rate is synthesized, and wherein the bit rate is changed based on the rate correction data without decoding all of the inputted moving picture data, see column 7, line 55 to column 8, line 43); wherein the bit rate correction means uses the rate correction data to change the bit rate of the encoded moving picture data according to a different desired bit rate to output a modified moving picture data at the desired bit rate (i.e., the particular selection of a new set of quantization interval meeting the predetermined amount provides a different desired bit rate to output a modified moving picture data at the desired bit rate, see column 8, lines 16-43); means for generating compressed moving picture data including encoded video packets (i.e., as provided by 6-15 of Figure 1) generated from uncompressed moving picture data (i.e., as provided by 1A, 1B, 1C, 2, 3A, 3B, 3C, 4, 5 of Figure 1); means for producing rate correction data (i.e., as provided by 14 of Figure 1, and see column 7, line 55 to column 8, line 43) including information about the encoded video packets, wherein the rate correction data can be used for changing a bit rate of the compressed moving picture data without decoding the encoded video packets, and means for adding the rate correction data (i.e., as output from 14 to 15 of Figure 1) to the compressed moving picture data (i.e., as provided by 9 to 15 of Figure 1) for output

outputted moving picture data; means for inputting the outputted moving picture apparatus (see Figures 1 and 19); means for retrieving the rate correction data from the outputted moving picture data (see Figure 19), and means for changing the bit rate of the output moving picture data by utilizing the rate correction data, wherein the bit rate is changed without decoding all of the encoded video packets of the outputted moving picture data (i.e., as provided by 14 of Figure 1, see column 7, line 55 to column 8, line 43).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3, 4/1, 4/2, 4/3, 5, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al as applied to claims 1, 2, 9, 10, 12, 13, 15, and 20 in the above paragraph (3), and further in view of Sethuraman (6,037,987).

Yanagihara et al discloses substantially the same moving picture data producing apparatus as above, further including means for recording reference inhibition area, wherein the area information is included in the rate correction data for each frame of the moving picture data (i.e., 18A, 18B of Figure 1); and using quantization value which is different from a value used when producing the compressed moving picture data (i.e., quantization value output from 8 of Figure 1 is different from quantization value as provided by 14 of Figure 1).

Yanagihara et al does not particularly disclose the followings:

(a) wherein the rate correction data producing means creates rate correction data which enable bit rate changing by the another apparatus by conducting a different quantization for the area in a P frame of the compressed moving picture data having a low probability of being referred to in a motion prediction operation as claimed in claim 3;

(b) means for recording reference inhibition area information about an area not to be referred to for motion compensation; motion compensation means for conducting motion compensation without referring to the area not to be referred to in conducting motion prediction for a next frame; motion compensation means for conducting motion compensation and outputting referenced area information referred to at a time of motion estimation, wherein the rate correction data producing means uses the referenced area information creates rate correction data which enables rate changing by the another apparatus by conducting a quantization for an area a low probability of being referred to in conducting motion prediction for the next frame as claimed in claims 4/1, 4/2, 4/3, and 5; and

(c) wherein the rate correction data producing means produces rate correction data which enables the bit rate changing by the another apparatus by creating an I frame as well as P-frame with respect to the motion picture frames generated as P-frame by the compression means, and motion compensation means for conducting a motion compensation operation in that only corresponding portion in the quarry out area is referred when the motion compensation for quarry out area as claimed in claims 8 and 11.

Regarding (a) to (c), Sethuraman discloses an apparatus and method for selecting a rate and distortion based coding mode for a coding system as shown in Figure 1, and

teaches the conventional motion estimation and compensation means (i.e., 140, 150 of Figure 1) for conducting motion compensation without referring to the area not to be referred to in conducting motion prediction for a next frame and conducting motion compensation and outputting referenced area information referred to at a time of motion estimation (i.e., as provided by the I- and P-frame motion compensation processing, see column 3, line 66 to column 4, line 8, column 5, lines 41-48) as well as providing the desired increase/decrease in quantization based on the buffer overflow/underflow conditions, thereby providing the different quantization for the area in a P-frame of the compressed moving picture having a low probability of being referred to in a motion prediction operation as claimed. And having provided the motion compensation means of Sethuraman within Yanagihara et al, the rate correction data producing means within Yanagihara et al thereby produces rate correction data which enables the bit rate changing by the another apparatus by creating an I frame as well as P-frame with respect to the motion picture frames generated as P-frame by the compression means, motion compensation means for conducting a motion compensation operation in that only corresponding portion in the quarry out area is referred when the motion compensation for quarry out area, and so that the means for recording reference inhibition area information about an area within Yanagihara et al is not to be referred to for motion compensation as claimed. Therefore, it would have been obvious to one of ordinary skill in the art, having the Yanagihara et al and Sethuraman references in front of him/her and the general knowledge of MPEG video compressions, would have had no difficulty in providing the I and P frame motion estimation and compensation processings, and the desired increase/decrease in quantization based upon buffer underflow/overflow

conditions all as taught by Sethuraman for the video encoder system of Yanagihara et al for the same well known adaptive quantization based on motion, and MPEG motion estimation and compensation for providing the best block matching purposes as claimed.

6. Claims 6, 7, 14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al as applied to claims 1, 2, 9, 10, 12, 13, 15, and 20 in the above paragraph (3), and further in view of Shimizu et al of record (5,748,245).

Yanagihara et al discloses substantially the same moving picture data producing apparatus as above, further including producing the rate correction data which enables rate changing by the another apparatus by conducting a quantization using a quantization value equivalent to a value used when producing the compressed moving picture data (i.e., as provided by 8, 10-14 of Figure 1 and see column 7, lines 55 to column 8, line 43)

Yanagihara et al does not particularly disclose the followings:

(a) wherein the rate correction data producing means deletes high frequency components from input uncompressed moving picture data in advance; wherein the rate correction data producing means determines position information identifying a position at which rear portion bits in packets of the compressed motion picture data can be deleted with respect to an area structured by a continuous arbitrary number of macroblocks and produces the rate correction data including the position information; and wherein the rate correction data includes bit deletion data identifying bits in the encoded picture data which can be deleted, and further wherein the bit rate correction uses the bit deletion data to delete some number of the bits to output modified moving picture data at a different desired bit rate as claimed in claims 6, 7, and 14; and

(b) wherein the information in the rate correction data includes information identifying less important bits of the encoded video packets, and wherein the changing the bit rate of the compressed moving picture data is done by stripping some number of the less important bits from some number of the encoded video packets without decoding the some number of the encoded video packets; deciding a deletion area of a frame in the moving picture data for generating deletion area data for including in the information in the rate correction data means; means for changing the bit rate of the outputted moving picture data by utilizing the rate correction data to delete the deletion area without decoding all of the encoded video packets of the outputted moving picture data, and for stripping some of less important bits without decoding all of the encoded video packets of the outputted moving picture data as claimed in claims 16-19.

Regarding (a) and (b), Shimizu et al teaches the conventional deleting of the high frequency components from input uncompressed moving picture data in advance (see column 10, lines 41-52), thereby identifying a position at which rear portion bits in packets of the compressed motion picture data can be deleted, bit deletion data, identifying less important bits of the encoded video packets and stripping some number of the less important bits from some number of the encoded video packets, and deciding a deletion area of a frame in the moving picture data for generating deletion area data. Therefore, it would have been obvious to one of ordinary skill in the art, having the Yanagihara et al and Shimizu et al references in front of him/her and the general knowledge of DCT frequency coefficient selections, would have had no difficulty in providing the deletion of the bit data from the deleting DCT high frequency components as taught by Shimizu et al for the system of Yanagihara et al so that the bit rate correction

means of Yanagihara et al uses the bit deletion data to delete some number of bits to output modified moving picture data at a different desired bit rate, changing the bit rate of the compressed moving picture data by stripping some number of less important bits from some number of the encoded video packets without decoding the some number of the encoded packets, deciding a deletion area of a frame in the moving picture data for generating deletion area data for including in the information in the rate correction data means, changing the bit rate of the outputted moving picture data by utilizing the rate correction data to delete the deletion area without decoding all of the encoded video packets of the outputted moving picture data, and for stripping some of less important bits without decoding all of the encoded video packets of the outputted moving picture data for the same well known video bandwidth reduction purposes as claimed.

7. The Examiner wants to point out that due to the above new grounds of rejections, only pertinent arguments from the amendment filed May 26, 2004 will now be addressed.

Regarding the applicants' arguments at pages 12-13 of the amendment filed May 26, 2004 concerning in general that Yanagihara does not teach the production an any "rate correction data" which is used by another apparatus to change the bit rate of already compressed moving picture data, the Examiner respectfully disagrees. As presented in the rejection above, circuit 14 of Yanagihara et al nevertheless is considered the "another apparatus" as claimed. And since circuit 14 has the capability of selecting a new set of quantization level so as to meet a threshold, i.e., predetermined amount (see column 7, line 55 to column 8, line 43), it is submitted that circuit 14 provides the same rate correction data as claimed.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications; please mark "EXPEDITED PROCEDURE") (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.

RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

8/5/04